

CLAIM AMENDMENTS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

- 1) (currently amended) A method for extended storage of reduced glutathione in solution, comprising the steps of:
 - a) dissolving a predetermined quantity of reduced glutathione in an aqueous medium having a pH of between 5.0 and 8.0 to produce a reduced glutathione solution having a predetermined initial concentration $[A]_0$, wherein, when the ratio $[A]/[A]_0$, where $[A]$ is the actual glutathione concentration at time t , is plotted as a function of time t , the concentration of reduced glutathione decreases over time in a linear fashion with a temperature-dependent slope; and
 - b) storing the reduced glutathione solution at a predetermined temperature which is above the freezing point of the solution and below 15° C, so as to maintain the rate of reduced glutathione decay at between 0 % and 5% of the predetermined initial concentration per month, where the initial concentration of reduced glutathione is between 10 mg/ml and 400 mg/ml.
- 2) (original) A method according to claim 1, wherein storage at said predetermined temperature causes a reduction in a rate constant for dimerization of reduced glutathione G-SH to form oxidized glutathione G-SS-G.
- 3) (canceled) A method according to claim 1, where the initial concentration of reduced glutathione is between 10 mg/ml and 400 mg/ml.
- 4) (original) A method according to claim 1, wherein the predetermined temperature is 5° C.

5) (currently amended.) A method for extended storage of reduced glutathione in solution, comprising the steps of:

- a) dissolving a predetermined quantity of reduced glutathione in an aqueous medium having a pH of between 5.0 and 8.0 to produce a reduced glutathione solution having a predetermined initial concentration, wherein the concentration of reduced glutathione decays over time in a linear fashion;
- b) storing the reduced glutathione solution at a predetermined temperature which is above the freezing point of the solution and below 15°C, so as to maintain the rate of reduced glutathione decay at between 0% and 5% of the predetermined initial concentration per month, where the initial concentration of reduced glutathione is between 10 mg/ml and 400 mg/ml.

6) (canceled) A method according to claim 5, where the initial concentration of reduced glutathione is between 10 mg/ml and 400 mg/ml.

7) (original) A method according to claim 1, wherein the predetermined temperature is above a freezing point of the solution and below 10° C.

8) (original) A method according to claim 1, wherein the predetermined temperature is 5° C.

9) (withdrawn) A method for extended storage of reduced glutathione in solution, comprising the steps of:

- a) dissolving a predetermined quantity of reduced glutathione in an aqueous medium having a pH of between 5.0 and 8.0 to produce a reduced glutathione solution having a predetermined initial concentration [A]₀;

- b) reducing the temperature of the reduced glutathione solution to a predetermined temperature which is sufficiently low to prevent oxidative dimerization of glutathione without freezing the aqueous medium; and
- c) storing the reduced glutathione solution at the predetermined temperature.

10) (withdrawn) A method for treating a patient with Parkinson's disease with reduced glutathione while minimizing the risk of oxidative stress on the brain, comprising the steps of:

- a) dissolving a predetermined quantity of reduced glutathione in an aqueous medium having a pH of between 5.0 and 8.0 to produce a reduced glutathione solution having a predetermined initial concentration $[A]_0$;
- b) reducing the temperature of the reduced glutathione solution to a predetermined temperature which is sufficiently low to prevent oxidative dimerization of glutathione without freezing the aqueous medium;
- c) storing the reduced glutathione solution at the predetermined temperature; and
- d) administering the reduced glutathione to the patient with Parkinson's disease.

11) (withdrawn) A method for treating a patient with emphysema with reduced glutathione, comprising the steps of:

- a) dissolving a predetermined quantity of reduced glutathione in an aqueous medium having a pH of between 5.0 and 8.0 to produce a reduced glutathione solution;

- b) reducing the temperature of the reduced glutathione solution to a predetermined temperature which is sufficiently low to prevent oxidative dimerization of glutathione without freezing the aqueous medium;
- c) storing the reduced glutathione solution at the predetermined temperature; and
- d) administering the reduced glutathione to the patient with emphysema.